are not double-counted (the same benefits attributed to more than one p gram element) and that all incremental costs are considered. Many existi analyses of environmental protection programs confine consideration costs to outlays by government entities, ignoring cash outlays and oppor nity costs borne by resource users. In the case of ground water protect] programs, where strategies often include land use restrictions and/or pro bitions on certain activities, private opportunity costs are likely to figi prominently in any comprehensive economic analysis.

Cost-Effectiveness

In addition to having a positive benefit/cost ratio, protection progr; elements should be designed to accomplish their purposes at the lowest p sible social cost. The calculation of cost should consider the full-time stre; of future costs, reduced to present value to permit comparison of alten tives. It should also combine costs incurred by public agencies with th borne by resource users and other private parties. Both cash outlays a other types of cost (values of foregone opportunities and reduced asset vali for example) should be reviewed in determining the alternative that pla the smallest possible burden on society as a whole.

Optimal Programs

Once program objectives have been stated, economic analysis is helpful determining which possible program elements are feasible and whetl each of these is cost-effective. However, these procedures omit evaluation the purposes themselves. It is also important to know that the specific go of the program are the best goals to pursue, that the level of protecti sought is the best possible level of protection, and that an appropriate b ance has been struck between expenditures for protection and possible la expenditures for cleanup. These considerations are a part of the question optimality: Is the program proposed the best possible program, all thii considered?

Economic analysis does not provide a well-marked pathway to optim ity. Rather, the methods of benefit-cost analysis permit the systematic co parison and ranking of alternatives. The result is identification of the best the alternatives considered, whether that preferred alternative is the best all possible programs or not. Still, the process of identifying and measuri benefits and costs frequently leads to insights that assist in reformulati programs for improved overall performance.

Comparison of program alternatives should take place after individi elements have been tested for feasibility, all program elements have be